

Educational Planning for a Poor Country

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THERE are many who believe that a poor country does not need a plan or cannot have one. What can you plan, they ask, when there is nothing to plan with? On a similar basis, there are some who argue that the Planning Commission should be abolished and that India should now give up planning altogether. According to this group of thinkers, planning of education in the first three five year plans was worthwhile because resources of a reasonable size were available. Now that the resources position is very unsatisfactory, they would prefer to abandon planning altogether. The obvious implication is that planning is necessarily an exercise for a time of plenty. I cannot share this view. Planning is essentially an exercise for a time of scarcity; and the greater the scarcity, the greater is the need for planning. A rich man can afford to live without planning his purchases or his menus for breakfast. But a poor man cannot live without planning every purchase and, maybe, every meal. Similarly, a poor country needs planning more urgently than a rich country. America has no national plan and no Planning Commission. Probably it does not need them. But India cannot do without a Planning Commission or without Five Year Plans. I therefore think that the need for planning is greater now than at any time in the past for the very reason for which it is proposed to be abandoned, namely, the resources available to us have shrunk to very low levels. If they were to shrink further, the need for planning would become greater still, and *not* less.

There is another important point to be noted in this context. What do we precisely mean when we observe that a poor country does not have 'resources' to plan with?

There are several types of resources. What is called a rich country in common parlance is one which has plenty of material resources; but its human resources may be limited. In a poor country, as generally understood, the material resources are limited, but there could be plenty of human resources. India is particularly rich in human material. We have only one per cent of the world's GNP. But we have one-sixth of the world's population or its potential pool of talent. The basic conditions between the rich and poor countries being thus totally different, it is obvious that the techniques of planning in one cannot be applicable to another. For instance, waste can be tolerated in a rich country because resources are plentiful. In a poor country, on the other hand, one cannot afford any waste at all. In a rich country, physical resources are used to make up for the shortcomings of manpower. In a poor country, manpower has to be utilised to make up for the shortcomings of material resources. Unfortunately, this important point is often lost sight of and a common mistake committed by the developing countries is that they adopt, rather thoughtlessly, the techniques of planning and development which they find in use in the developed countries. This absurd attempt generally leads to frustration and create an impression that planning itself is wrong or unwanted.

A good illustration of this was brought to my notice recently. The principal of a college where I went to speak on educational planning was apologetic about the temporary pandal in which the lecture was to be given, and regretted very much that the college did not yet have an assembly hall. I do agree that, like educational insti-

tutions in rich countries, we too should also aspire to have an assembly hall in a college. It will cost some lakhs of rupees and we will use it only for a few hours in a year. The cost of utilization per hour of the assembly hall would therefore run into fantastic figures. But how does that matter? As Dr. Kothari says, "It is always easier to spend money than thought, especially when it is someone else's money." But let me raise an important issue: what is wrong with a pandal for a meeting? It may be that it costs some money to put it up on every occasion. But this amount will be small in comparison with the cost of the assembly hall or even its maintenance; and it has the added advantage of providing some work for poor people. I will certainly have no objection to assembly halls when we shall be able to afford them. But until that time is reached, I would prefer pandals, and where even pandals are not available I would welcome open air meetings which can easily be arranged at a convenient time of the day and in appropriate months of the year. It is in situations of this type that I am reminded of the valuable advice given by Mahatma Gandhi. He used to say: (1) India is a poor country; and (2) do not run it like a rich country till it actually becomes a rich country. These are simple things no doubt. But we often forget them and land ourselves in difficulties.

In my opinion, the developing countries need to develop 'the art, science and philosophy of planning for a poor country'. They cannot get this expertise from the rich countries. You know the well-known story (perhaps apocryphal) of Marie Antoinette who advised people to eat cake if bread was not available. Here is an example of a well-intentioned rich person trying to plan for poor people and one can easily see how absurd the result is. The attempt of a rich country to try to plan for poor countries often becomes equally ridiculous. A good example of this is the American advice that a poor country like India should establish four-year integrated courses in special non-university institutions like the Regional

Colleges to solve the problem of her teacher education. This technique is of doubtful utility and too costly to be repeatable. It will never have any significant impact on our system of teacher education and the immense resources that were wasted on it could have been utilised to vitalise the 250 training institutions that serve the real needs of this country. I would, therefore, suggest that it is for poor countries themselves to work together and develop new techniques of planning which can be of assistance to them. As the old proverb goes: it is the poor that helps the poor.

II

Educational planning in a developing society is subject to several limitations which will have to be kept in view while formulating what I have described as 'the art, science and philosophy of planning for a poor country'. Some of the more important of these are mentioned below:

(1) In absolute terms, the financial resources available for planning in a developing country are limited. For instance, India spends about Rs. 16 or a little more than 2 US dollars per head of population on education, while America spends about 180 dollars per head of the population for her education. In fact, what we spend on education is probably equal to what an average American spends on sedatives or sleeping pills. The gap between the two levels of expenditure is frighteningly wide and, as time passes, it is tending to become wider still.

(2) In spite of their low level of investment in education in absolute terms, it has to be remembered that the poor countries are making a relatively more intensive effort to develop education than the rich ones. For instance, India is spending about 3 per cent of her national dividend on education when the total national dividend is only about 80 dollars. As against this, America is spending 6 per cent of her national dividend of about 3000 dollars. The intensity of the effort to invest in education is related to 'savings' or the gap between

the total national dividend and the minimum required for subsistence. This gap is so small in India and so wide in America that one would be justified in concluding that an investment of 3 per cent of the national dividend on education in India (at the 80 dollar level) implies a far harder effort on the part of the people than that of 6 per cent of the national dividend in the US (at the 3000 dollar level).

(3) Money is undoubtedly a very difficult thing to find in a poor country; and yet, paradoxical as it may seem, finances for the development of education are often more plentifully available in poor countries than 'real' resources in terms of materials. For instance, it is easier to get money in India for construction of buildings than either cement or steel. Grants for scientific equipment or libraries are obtained far more easily than the equipment itself or good books. This is all the more so where the equipment or books have to be imported. In other words, in planning for a poor country, there are often severe restraints of physical resources which are even more stringent than the monetary ones.

(4) This paucity of available resources in money or materials for purposes of planning in a poor country is only equalled by the absolute immensity of the tasks it is required to perform. For instance, in the U.S., the problem of adult illiteracy does not exist. Not only primary, but even secondary education, has been made universal. In expansion, therefore, the country has to concentrate mainly on two areas — higher and adult education. The standards of education are also high so that the qualitative tasks before the educational system are also not formidable. And yet, for the performance of these residual tasks, the country has immense resources available. On the other hand, India has a far vaster task to perform than the U.S. She has to liquidate a mass illiteracy of about 70 per cent. She has not yet been able to provide even universal primary education

and the expansion of secondary and higher education is as yet very limited. The quality of her schools is far from satisfactory; and in every other important respect, it has still great leeway to make. For all this immense task, however, the resources available to her are pitifully small in comparison to those of the U.S. This is yet another point of contrast: the gap between 'needs' and 'resources' is far wider in the developing countries than in the developed ones.

(5) The rich countries which have now come to have well-developed educational systems related to productivity find themselves in a 'golden' circle. Because they are rich, they can afford to invest large amounts in educational development. This leads to considerable increase in national income and, in its turn, enables the country to make a still larger investment in education, and so on. In contrast to this, a poor country is caught, sooner than later, in a 'vicious circle'. Because it is poor, it is not in a position to invest much in education and to develop it in a big way; and as its educational system is generally unrelated to productivity, even such investment as it makes in education does not necessarily lead to a proportional increase in national income. This failure to develop the educational system in a poor country affects the quality of its human resources and the nation tends to become poorer still.

In view of these fundamental limitations, the system of educational planning for a poor country will have to be based on the following five basic principles amongst others:

(1) *Cost Construction*: Poor countries often adopt educational plans without due regard to the cost involved. As resources available to them are very limited and have to be used in the most economical manner, every scheme they undertake should be submitted to rigorous cost-benefit analysis. Alternative uses for the investment of available resources will have to be carefully weighed and priority will always have to be accorded to those programmes which yield a better result for

a given investment or require a smaller investment to produce the same result.

(2) *Intensive Utilisation of Available Resources*: Since funds are limited in poor countries, they have to take special steps to ensure that all available resources are most intensively utilised at the existing level of investment. In fact, it should be a matter of policy in planning that additional investment to ensure a better return from existing facilities should be accorded high priority; and subject to this reservation, new investments should be permitted only when the maximum possible utilisation of facilities has been obtained at the existing level of investment.

(3) *Research for the Development of Less Costly Techniques*: An important contribution of science is to make it possible, through research and mass production, to produce things of higher quality at lesser cost. Such a programme has not yet received the attention it really deserves and it is tacitly assumed that better education is necessarily costlier or what is even worse, that costlier education is necessarily better. The rich countries have not seriously felt the need for such research. But the poor countries cannot do without it.

(4) *Selective Approach*: There is a general tendency, while planning for education, to undertake too many schemes, and to spread the available resources over too wide an area. This always leads to waste and it is, therefore, necessary to adopt a selective approach on the basis of rational and well-defined priorities. This is necessary even in rich countries because there is always a gap between needs and resources. But in poor countries, this gap is wide and the need to determine priorities becomes both extremely urgent and difficult.

(5) *Human Effort*: The vicious circle in which poor countries find themselves — poverty leading to non-development of education which, in its turn, leads to still greater poverty — can best be broken through human effort and hard, dedicated and sustained work on the part of all con-

cerned. In fact, as stated already, poor countries have deliberately to utilise greater human effort to make up for the shortfall of material and monetary resources.

These five basic principles are discussed in some detail below.

III

Let me begin with the idea of cost-consciousness. Since resources are scarce, poor countries have to use them in the most economical manner. But this cost-consciousness has not been much in evidence in our Five-Year Plans. On the other hand, we have developed an expenditure-orientation to our plans under which the progress of education is judged more by expenditure incurred than by any other criteria. Consequently, there is often a competition in spending more and plans are undertaken without reference to the cost involved; no cost-benefit analysis of any major schemes has been undertaken. Sometimes even an actual preference is shown for schemes wherein money can be spent easily and plentifully. Such techniques of planning have no place anywhere, not even in the richest of countries, and even if they had, no poor country, least of all India, can afford these luxuries.

Some illustrations may be given of the general disregard of cost-considerations which is a feature of our educational planning.

Size and Location of Educational Institutions: There is a close relationship which may vary from one category of institutions to another, between the size, cost per student and efficiency of an educational institution. There is, therefore, an optimum size for each category of institutions at which its efficiency is the best and the cost per student is the lowest. This important aspect of the problem has received little attention so far and there are far too many institutions of too small a size that prove to be very costly. Here are some illustrations of what I have in mind.

(a) In Madhya Pradesh, the policy adopted is that every secondary school

must be a higher secondary school. Where we can have an enrolment of about 300-400, the cost per student is reduced to its lowest level, and there can be no financial objection to this proposal. But if it is decided to convert *every* secondary school to the higher secondary pattern, and if rural schools, which generally have an enrolment of less than 100, are made higher secondary, the cost per student mounts up to prohibitive levels because each school needs a minimum staff of six lecturers. The proper policy to be adopted in this country is to adopt the ten-year school as the ordinary pattern, especially in rural areas, and to convert only selected schools to the higher secondary pattern.

(b) *Sanskrit Departments in Affiliated Colleges*: A subject like Sanskrit is not popular at the university stage, but for cultural and other reasons, we have to make an effort to provide adequate facilities for its study. But this does not mean that we should totally disregard enrolments or provide these facilities in every college in a city or a big town. Recently, I made a study of Sanskrit Departments in colleges of Bombay city and found that they were all small and the cost per student was as high as about Rs. 2,000 per year or even more (as against the average cost of Rs. 400 per annum for the popular subjects) and that the cost could be lowered to about Rs. 500 or so if these facilities could be provided in one or two institutions only instead of being scattered over eight or ten. A proper planning of facilities for Sanskrit education can thus save a lot of money. But these aspects of the problem have received no adequate attention so far.

(c) *Adoption of Costly Patterns*: It is true that we shall have to make larger investments to improve quality. But one has to make an intensive effort to identify elements which really contribute to quality and ensure that unnecessary expenditure unconnected (or only thinly connected) with quality is avoided. One concedes the point that an IIT will cost more than an ordinary engineering college. But one does

not feel sure that all the expenditure that is now incurred on IITs is really necessary for quality. In fact, I have a feeling that there is a good deal of snobbish or prestige expenditure incurred on these institutions which can be easily cut out with no adverse effect on quality and, in some cases, with positive gain. The standards that we adopt in the construction of our buildings, especially in higher education, are often based on ostentation and one cannot help feeling that our expenditure on buildings can be substantially reduced. There is no gain-saying the need to build up high quality postgraduate departments in universities. But this does not necessarily justify over-investment in university buildings. The heights of the university towers are not always proportional to the academic development in the classrooms.

The regional colleges of education themselves are a good example of our lack of cost-consciousness. There are two patterns of teacher-education, the integrated pattern adopted in the U.S. where the professional education of teachers is combined with their general education at the undergraduate stage and the U.K. pattern where professional education is provided, after the first degree. There is no reason to assume any marked superiority in the U.S. pattern over the U.K. one, so as to justify the large investment needed in the former. And yet we undertook this plan of eating cake when bread is not available, regardless of our capacity to generalise it. We also did not weigh the advantages of starting these courses in universities with good science departments already in existence. This would have been far cheaper in cost and much better in quality. Instead, we started them in new non-university institutions like the regional colleges where everything had to be started from scratch and where costs were bound to be prohibitively high. What is worse, we did not even utilise this opportunity to do something different from what the universities were doing, something which is really integrated — instead of a mere repetition of the university courses at greater cost and

perhaps with less efficiency. There can hardly be another such example where the intellectual inputs were kept at the minimum and monetary ones at the maximum. This is precisely what planning for a poor country should *not* be.

IV

The resources available to the educational system are by no means plentiful and there is an urgent need to make larger investments in education. But even a casual study of our educational system shows, not so much the lack of resources as the under-utilisation of even such resources as already exist. In fact, the extent of under-utilisation is often so flagrant as to seem almost criminal.

Some illustrations — particularly the utilisation of buildings and equipment — will show what I have in mind. Some institutions do not have adequate and satisfactory buildings. But can we say that all the existing buildings are fully and intensively utilised? The answer is definitely no! Studies made by the Education Commission show that the vast majority of educational buildings are utilised only for about five to six hours per day. In most buildings, the utilisation of different rooms shows considerable variations and, in several instances, room after room is used only for a few hours a week. The laboratories and the libraries, which should really be used for at least 10 to 12 hours a day and for all days of the week and all the months of the year (including the vacations) are used for a few hours a day on working days only. But the educational buildings and hostels remain largely unutilised in vacations because no useful vacation projects are generally organised. These general observations will apply, *mutatis mutandis*, to equipment as well. A good deal of equipment, sometimes of a costly type, often remains unutilised for want of proper maintenance. Even when it is in working order, the utilisation is far from intensive. Given a careful plan, it is possible to use it more intensively and over longer periods.

Several imaginative headmasters of secondary schools, whom I know personally, have devised programmes for a better utilisation of their existing facilities at the cost of very little additional investment. I give below a few examples which come to my mind.

(1) One important means of raising standards, especially with regard to children from the poorer classes or slum areas in cities, is to provide them with better conditions for study. They do not generally have all the textbooks that are needed. Most of them live in small tenements where they do not get adequate space or quiet which are so essential for good study. They also receive no guidance at home because their parents are generally less educated than themselves. What is needed to improve the attainments of these children is to provide them with all the textbooks, some individual guidance and a quiet place where they can do their home work undisturbed. This does not necessarily require heavy additional investment. A friend of mine has designed the building of a secondary school in such a way that a number of beds are built into the walls, as in a railway compartment. All the classrooms in the building can also be used as dormitories. The additional expenditure in this type of construction was very meagre, about Rs. 50 per bed. But it enabled him to invite the poor children from slum areas who attend school to live on the premises. They go home only for their meals. As a rule, they come to the school after their supper at 8 p.m., study till 10 or 11 p.m. and again in the morning. Then they go home at about 10 a.m., have their meals and come back at 11 a.m. when school begins. They remain in the school till 5 p.m. play till about 6 or 6.30 p.m. and then go home for supper. One or two teachers remain present in the school at night and again in the morning to provide guidance to students and are suitably remunerated. There is a good textbook library in the school so that all students have easy access to the textbooks

that they need. The additional expenditure on this programme is very small — it works out to about Rs. 20 per child per year, — but the results show a magnificent improvement in the attainment of these students.

(2) Another example is of an interesting vacation programme which is being tried out by some secondary schools in Bombay. These are attended by children from the lower middle or working classes who are too poor to send their children outside the city during the summer vacation. Moreover, they generally live in such small and crowded houses that they are virtually compelled to wander on the streets throughout the day when their school has its vacation. To meet the special needs of such children who form the bulk of their enrolment, these enterprising headmasters convert their school buildings into a hostel in the summer vacation. The children who want to avail themselves of this programme are allowed to spend their entire time on the school campus, going home for meals only. A number of teachers work with them, supervising their reading, guiding their studies and providing opportunities to them for play or the cultivation of hobbies. The only expenditure involved is on the remuneration of teachers and some material and this works out to about Rs. 10 per student for the entire vacation. But the advantages of the programme are immense. The students feel greatly refreshed and improve in their studies.

(3) Yet another interesting programme has been developed by a friend of mine, a teacher in Poona University. He uses psychological tests and identifies the most talented children in all the secondary schools in Poona city. He then brings them together and arranges special guidance and teaching for them, with the help of some of the best teachers available, in the last year of their school. The results have been outstandingly good and the expenditure is comparatively small. There is no reason why attempts of this type to identify talent at a fairly early age, say about 13 or 14

years, and to develop it intensively, should not be made in every city.

(4) There are several teachers I know who organise a number of vacation programmes, not only for children from their schools but also for those from other schools in the neighbourhood and even for non-attending children who can participate with advantage. For instance, several of them run special libraries for children during the summer and winter vacations and these are availed of enthusiastically by thousands of children. Some teachers keep the craft-sheds working in the vacations to provide scope for the development of hobbies. In some schools, the laboratories are kept open in vacations in order that teachers and students of primary schools in the neighbourhood, who do not have these facilities, may come to receive instruction and do practical work. There are schools which run circulating libraries for schools in their neighbourhood and I have known of one which sends round its film projector to schools in the neighbourhood. In one State, workshop facilities are not generally provided separately to individual schools but are created in central places and shared by a number of neighbouring schools.

(5) Intensive utilisation of facilities will have, as indicated above, important advantages for students of the institutions concerned. But they can also be so utilised for two other purposes of great significance. The first is to make the facilities in the educational institutions available to non-student youth who desire to keep up their interest in studies and personal advancement; and the second is to make them available to the adult community for programmes of continuing education. In fact, every educational institution can become an effective community centre and serve both the young and the old in its neighbourhood through a more intensive use of available facilities and with very little additional investment. But unfortunately,

*these programmes have not received much attention so far.

I might close this discussion with a quotation from the Report of the Education Commission.

'Adequate Utilization of Institutional Facilities: Since it is very costly to provide and maintain the physical plant of educational institutions, it becomes necessary to utilize it as fully as possible, for the longest time on each day and for all the days in the year, by making suitable administrative arrangements. Teachers and students would continue to have their own hours of work and vacation as recommended above. The libraries, laboratories, workshops, craft sheds, etc. should be open all the year round and should be utilized for at least eight hours a day, if not longer. Special vacation programmes should be arranged to utilize institutional facilities for community service, adult education, temporary hostels for day students, enrichment programmes for gifted students and supporting programmes for retarded students. It is not necessary to indicate all the different ways in which the institutional facilities could be utilized all the year round. If an understanding is developed that educational institutions are like temples of learning and should never remain closed and if a proper climate for sustained work is created, teachers, students and the local communities will themselves discover innumerable methods of utilizing school facilities to the maximum potential throughout the year. When it is difficult to expand educational facilities adequately and a waste to under-utilise existing resources, such programmes demand urgent attention."

V

In a poor country, it is absolutely essential to keep down the unit costs consistent with maintenance of standards. Educational research organised on proper lines

can be of great use from this point of view.

Let me take an interesting example, namely, the teaching methods in primary schools. The methods of teaching which we now adopt in our primary schools and generalise through our training institutions have largely been borrowed from the industrially advanced countries of the West because we have not yet carried out any worthwhile research to discover new techniques which are more appropriate to our conditions. But these methods are suitable only for classes of small size, which have now become general in these countries. These countries can afford classes of small size, partly because of the ample resources available and partly because they have a low birth rate and consequently a comparatively smaller number of children to educate. But the conditions in the developing countries are just the opposite. They have meagre resources and a high birth rate which results in their having a comparatively larger number of children to educate. These countries are, therefore, under a financial compulsion to adopt a larger class size. This will, however, not be possible unless methods of teaching appropriate to larger class-sizes are evolved and universally adopted.

I must however qualify this statement in certain respects. I do not mean that there is a method of teaching appropriate to any size of class and I do concede the point that there is an upper limit to a class size beyond which the efficiency of teaching begins to be adversely affected. There is also a lower limit to a class size which is generally dictated by financial and administrative considerations and the efficiency of teaching does not necessarily improve when the class-sizes fall below a critical level. But between these two extremes which cover a fairly wide range, there is no special sanctity about any particular class size. There are certain methods of organisation and teaching which can be used only if the total size of the class is small, while there are others which can be used, without any deterioration to standards, in classes of a

much larger size. If the proper techniques are adopted, it is thus possible to obtain fairly good results in any class size, within the given range, which might be found to be financially necessary.

It is possible to show mathematically that there is a close direct relationship between the birth rate and class size at the primary stage, where universal education has to be provided. Hence countries with a large birth rate will be under a financial and administrative compulsion to adopt a larger class size. This is so in all developing countries and especially in India. Unfortunately, the teaching profession in this country has not accepted the large class as an inescapable necessity and it is not also trained academically to handle it in an efficient manner. Yet the average situation in the country is such that six teachers out of ten are called upon to face classes of very big size. It is this contrast between the training of teachers and their expectations on the one hand, and the needs of the social and economic realities on the other, and not the large classes as such, that causes the present malaise in India. If we could only accept a large class-size as an economic necessity for the next 10 to 15 years, if we could concentrate on the evolution of teaching methods suitable for large classes, and if we could train our teachers properly in the handling of these methods, the educational standards would materially improve in spite of the large size of the classes.

There are several other low-cost programmes for the development of education which we can adopt with advantage. For instance, programmes of part-time education and correspondence courses will have to be developed in a big way both at the secondary and the university stages. This will reduce recurring as well as non-recurring expenditure and, what is even more important, make educational facilities available to all those persons who desire to educate themselves further but cannot afford to join full-time educational institutions. Development of programmed instruction can be another technique which can

help us to spread education and to improve its quality at a comparatively small cost.

The developing countries have limited resources no doubt. But they rightly aspire to create an educational system which is comparable to that in the industrially advanced countries of the West, both in coverage and in quality. They will have no resources to create such an educational system if they were also to imitate Western techniques which are generally costly, and beyond the reach of poor nations. In fact, any attempt to create a western system of education with all its objectives, programmes and techniques, in a poor eastern country is as absurd as that of trying to force an elephant into a whisky bottle! The only way out, therefore, is for the developing countries to develop low-cost techniques within their reach, which can enable them to catch up with the educational systems of the industrially advanced nations in quantity and in quality. In this context, I can do no better than quote from the address of Dr. D. S. Kothari to the Education Commission at its inaugural function on 2nd October, 1964. He said:

'It is important to recognise that one of the characteristics of science is that things of quality should not necessarily be expensive. If enough thought is devoted, it should be possible to have education of quality and yet cheap enough to be within our means. Science brings today within the reach of the common man things which at one time were not available to the very rich. The same can apply to education, but to bring this about would need hard work and much serious thinking and research into the process of education. The new techniques and instruments of education, such as Correspondence Courses, Programmed Learning, Audio-Visual Aids, can be of great value to us; but much of the new techniques required will have to be discovered and developed by ourselves. In fact in this matter we can and ought to be able to do more than the advanced countries. I am re-

minded of what my former teacher at Cambridge, Lord Rutherford, the pioneer of Nuclear Physics, said when he was told that America was going ahead in Nuclear Physics because they have a lot of money. He was asked what England should do. He replied in the robust way of his: "Americans have money, we do not have it, and so we have got to think". There is no substitute for hard and serious thinking; and with sustained and serious thinking and with sustained and serious effort, we should be able to go a long way even with our meagre resources and capital. This perhaps explains why the Minister has appointed the Commission. Its real justification will be if we could do hard and realistic thinking so that the education we need to meet our requirements — material, cultural and spiritual — could also be brought within our reach'.

VI

Let me now come to the fourth important technique of planning, namely, the selective approach in the development of educational institutions. In a poor country, the resources available are limited and the number of educational institutions is disproportionately large. It is, therefore, not possible to improve all educational institutions; and it is also not desirable to improve none of them. The only rational way out therefore is to select *some* institutions for development in the first instance, and to increase their number as more resources become available. Theoretically, therefore, a poor country has no alternative to the adoption of a selective approach in the development of its educational institutions.

And yet, whenever this idea of a selective development of educational institutions is put forward, there is strong opposition from every quarter. The egalitarians oppose it on the ground that it is undemocratic, that it will discriminate in favour of the haves and against the have-nots, and that it will widen the inequalities in the existing system by making the good schools better and the poor schools, poorer. The

politicians oppose it because they would prefer a system which enables them to distribute favours to as many institutions as possible without being called upon to answer awkward questions about priorities or principles. The administrators also oppose it on the ground that the present system based on a few simple rule-of-thumb principles is easier to administer and that a system of selective development where they are required to use their judgment and discretion is likely to expose them, in spite of their best efforts, to charges of 'casteism', favouritism or even corruption. What is worse, the educational institutions themselves oppose it with great vehemence. The reason is quite understandable. Each institution tries to weigh the chances of its being selected for special development under such a programme; and if it finds that such chances are bleak — these will necessarily be so for the vast majority of institutions — it generally decides to oppose the idea itself. Consequently, the proposal is voted down by a large majority, the weakest institutions generally playing the most vociferous role in shouting down the innovation. It is significant to remember that the Education Commission's idea of selected development of a few universities was most vehemently opposed by the universities themselves. Even the good institutions are not enthusiastic about it because they feel that this move which is initiated ostensibly to support them, may ultimately be subverted by politicians and other influences to benefit undeserving institutions with a political pull in preference to those institutions whose only strength lies in the excellence of their work. All things considered, it soon becomes evident to the planner that the selective development of educational institutions has no friend in any worthwhile quarters.

How can we meet this situation? In my opinion, the opposition to the selective approach is based, partly upon some wrong applications of the selective approach in our recent educational history, and partly upon certain misconceptions about the problem. If, therefore, we can dispel these

misapprehensions through proper presentation and apply the techniques of the selective approach in the right way, there is every possibility that the present opposition to the proposal will disappear and be replaced by strong popular support. This is what we should try to do and, I shall indicate some ways in which this can be attempted.

It may be convenient to begin with one or two 'don'ts.' My first suggestion is that a selective approach should not adopt the planning techniques of what I might designate as the 'Anglo-Indian Suburbs'. The British bureaucrats who ruled India found that they had to live and work in towns and cities most of which were unplanned and dirty, and that they were also required to pay a few visits to villages which were even more insanitary. The idea of improving conditions of life in all the villages, towns and cities of India was something which they always shrank from as an impossible achievement. They, therefore, concentrated their efforts on creating artificial islands of prosperity in the country, in which they could live and work happily and forget the dirt, disease and destitution in the remaining areas. They thus created new Anglo-Indian suburbs for themselves — New Delhi for the Government of India and Civil Lines and Cantonments for almost all other cities and towns — and beautifully located, well-furnished and well-maintained Dak Bungalows or Rest and Circuit Houses to dot the entire countryside. This was an easy programme to implement and not very costly to administer and yet it gave them all the advantages of being able to live in islands of prosperity and thereby ignore the poverty and misery that was India.

This attempt to escape into artificial and unnatural islands of prosperity can be seen in education also. Take, for instance, the public schools. A Public School is undoubtedly a good institution. But what role does it precisely play in education? The number of public schools is very small — about 50 with a total enrolment of about 25,000. Their cost is also fabulously high

so that they are beyond the reach of all but the very rich families. The public schools therefore are like an artificial island of prosperity in education, which help the very rich people to get good education for their children and forget the thousands of other schools in the country which maintain such low standards. The public schools are like skyscrapers in the midst of millions of hovels. But any number of such skyscrapers will not be able to hide the misery and poverty of the millions of huts that surround them.

I am afraid that this escapist policy of building up a few giants while allowing the rest of the society to be pigmies will not work. For us, a better planning technique is indicated by Browning's prayer in *Fra Lippo Lippi*:

'Make no more giants, God!

Raise up the whole race at once.'

The creation of a few peaks of excellence here and there cannot inspire the entire educational system to move upwards. Very often, they become a source of despair because they are so obviously beyond the reach of the average institution. What is worse, the resources spent on building them up reduce the funds available to other institutions to such an extent that the pace of their development is reduced even further.

These considerations can be applied to the improvement of teacher education in India. The main objective should be to raise, as soon as practicable, the standard of each one of our training institutions — their number is about 250 at present. There is a place for the creation of a few pace-setting institutions in this programme. But the pace should be repeatable and should inspire and help the others to follow them. The Regional Colleges, as they have now been constituted, do not qualify themselves for this role. They are very costly ventures and unrepeatable. I doubt their claim to be considered as peaks of excellence. Their expenditure is so high that it can never be possible for the average train-

ing institution to reach it. What is worse, the establishment of these institutions had definitely prevented us from making an earnest effort to improve the training institutions in the country. I very strongly feel that if large resources which have been sunk in these white elephants had been made available for the improvement of the training institutions for secondary teachers, the cause of education in the country would have been promoted more fruitfully.

There is a second 'don't' which I would emphasise: in developing selected institutions: care should be taken to see that quality does not become allied to privilege. The facilities offered to educational institutions selected for qualitative improvement should be available to all on the basis of equality and not restricted to a privileged few. The Regional Colleges of Education are not fortunately open to this charge. But the Indian Institutes of Technology (IITs) are. The Education Commission made a study to find out who gets admission to the IITs. The data showed that 87 per cent of the students who are admitted to the IITs belong to families whose monthly income is more than Rs. 500. In other words, 87 per cent of the admission go to the top one-half per cent of the population. Do we seriously allege that there is no talent in the remaining 99.5 per cent of the population of the country? Are they merely the *Parayas* who have to exist on the charity of the great ones? It is also interesting to note that 50 per cent of the students who got admission to some IITs came from English-medium schools. This is understandable because their entrance examination is held in English. But is it fair that English-medium schools whose enrolment is less than one per cent should get 50 per cent of the admissions to the IITs? This is where one sees privilege and quality getting tied up together. Who sends their children to the English-medium schools? It is the senior Government servants, rich businessmen, and others who form a small top-class coterie. It is the children of this privileged group who are admitted to the IITs and are able to get

big jobs in due course. So a small top-circle of society is helped to perpetuate its privilege under the name of quality.

I stand for quality, but the poor people also must have a share in this quality. I have no objection to someone eating cake every day provided I also get a bite at them now and then. But if I am not to get any cake at all, I will certainly be irritated, and try to see that no one will ever have cake. This revolt will come up amongst the poor people if quality and privilege are always allied. Remember that these ivory towers which we are creating are all built on sand because the common people have no stake in them. If this separation between the masses and quality continues, if privilege and quality always remain together, the people of this country will rise in revolt one day and will throw out both quality and privilege.

I now come to the positive aspect of the problem and shall indicate a few criteria which are essential for the successful implementation of a policy of the selective development of educational institutions.

(1) It must be remembered that the ultimate objective is to develop all educational institutions and that a programme of selective development is proposed as a means of reaching this objective as quickly as possible. The programme of selective development should therefore be so designed that it helps to hasten the general development of the system as a whole and that, under no circumstance does it hinder such development.

(2) The first round of institutions selected for development must be sufficiently large to meet all legitimate aspirations. The Education Commission, for instance, recommended that 10 per cent of the institutions in a given category should be selected for development.

(3) The level of development visualised should not be so high as to be beyond the reach of the average institution. In fact, the cost per pupil in the fully developed institutions should be about thrice that in

an ordinary institution. This will make the experiment repeatable in the sense that excellence of this type could be expanded to other instances with comparative ease and in a reasonably short time.

(4) Simultaneously with the launching of the experiment, a complementary scheme should also be launched under which institutions not selected in the first round can still be assisted to develop their potential and can thus hope that they too may get into the selected group if they show performance and promise. Similarly, the selected institutions should also be given to understand that their selection is not a once-and-for-all-time affair and that it is contingent upon continued good performance. In other words, the category of selected institutions should be an open and ever-widening community into which members not selected at a given stage can hope to get admission upon fulfilment of certain conditions just as members once selected may also be compelled to go out for failure to comply with these conditions.

(5) The admissions to institutions thus selected for development should be made with due regard to the principles of social justice and every care should be taken to ensure that this attempt to improve quality does not get allied to privilege.

(6) The institutions selected for development will naturally have better facilities than many others. It should be an objective of policy to enable these institutions to share their facilities with others. For instance, it may not be immediately possible to give a film projector, a good library, or a good laboratory to every school. But when these facilities are created in selected institutions, it should be possible to develop programmes under which such facilities can be shared by other institutions in the neighbourhood.

(7) The scheme will have to be administered with vision, imagination and impartiality. The selection of schools for special development should be on the basis of academic criteria and receive the support

of the academic community. This will create a healthy competition between educational institutions in developing excellence.

The point which I would emphasise is this: There is no escape in a poor country like India from adopting the selective approach for development of educational institutions. It is unfortunate that the strategy adopted for development of selected educational institutions in the past was wrong and its disastrous consequences have made people suspicious of the programme itself. But in the larger interests of education, the existing suspicions and apprehensions about this technique have to be overcome through implementation on the right lines. We should make it clear to all concerned that this technique is really equivalent to what is often described as 'corn-seed technology' according to which excellence is first bred in some institutions through a concentration of human and material resources and then extended to other institutions. In fact, if properly implemented, this technique is the shortest way in practice to improve *all* educational institutions; and, far from allying itself with privilege, it actually increases the chances of the access of the underprivileged sections of society to good education.

VII

This brings me to the last technique of planning for a poor country, namely, emphasis on human effort. I said earlier that the developing countries now find themselves in a vicious circle: they cannot make adequate investments in education because they are poor; and since their educational system continue to be unreformed and undeveloped, they tend to become poorer still. This vicious circle can only be broken through • dedication and human effort. Idealism is thus needed, now more than ever, and the only substitute we can have for hard work is still harder work. Unfortunately, the significance of these programmes is not realised. But planning for

a poor country cannot succeed unless it emphasises sustained hard work.

I should like to make two concrete suggestions in this regard. The first is that a climate of sustained hard work should be created in all educational institutions by increasing the number of working and instructional days and by lengthening the working day. The Education Commission pointed out that 'there is considerable variation, from area to area, in the total number of working days in a year — these range from 172 to 309 at the school stage and from 120 to 240 at the university stage. The number of holidays given within a school year shows even larger variations — from 20 to 75 at the school stage and from 4 to 49 at the university stage. Similarly, the total duration of vacations varied from 36 to 84 days at the school stage and from 62 to 137 at the university stage. The days utilised for examinations (inclusive of preparatory leave) vary from 10 to 77 and the loss on account of celebrations such as foundation days, annual functions of societies, etc., is sometimes as high as 40 to 60 days in a year. These facts are a sad reflection on the efficiency of the educational system; and the general under-utilisation which they represent in a developing economy like ours is tantamount to an unpardonable waste of scarce resources. We, therefore, recommend that the number of instructional days in a year should be increased to about 234 (or 39 weeks) for schools.' (Report, p. 38) I would therefore strongly support the following recommendations of the Commission on this subject:

'....it should be ensured that the minimum number of instructional days should not be less than 234 a year for schools and 216 a year for colleges. This can be done by introducing two reforms:

'(1) The first is to cut down other holidays which are now as many as 35 or even more in a year. The general experience is that they serve no useful purpose and merely disturb the work of educational institutions. We recommend, therefore, that these

should be drastically cut down to ten (which also includes three days for unexpected events). In our opinion, there is no need to close an educational institution on a religious holiday. Nor is it necessary, for instance, to close it on birthdays or death anniversaries of great Indians; the time could be better utilised in working hard for national development.

'(2) The second is to fix an upper limit, in each given year, for the loss of working days to instruction due to all causes including examinations — 21 days in schools and 27 days in colleges.' (Report, p. 39)

Similarly, it is also necessary to lengthen the working days and to utilise them much better. At the school stage, the working hours per day should vary from about four hours at the pre-primary stage to about six hours at the higher secondary stage, excluding the time for co-curricular activities. At the university stage, our effort should be to involve students in challenging programmes of study and work for about 50 to 60 hours per week. This will include, not only 'contact' hours (about 15 to 20 per week), but a large proportion of time devoted to self-study. As one goes higher up the educational ladder, the 'contact' hours should become less and the time for self-study should be lengthened correspondingly.

My second concrete proposal is that greater emphasis should be placed, in the years ahead, on those programmes of educational development which depend essentially on human effort. These will include the following:

(1) *Revision of Curricula and Courses:* A major objective of this programme should be to orientate education to national needs. This would include programmes such as promoting national consciousness, emphasising character formation through the cultivation of moral, social and spiritual values, improving science education, introducing work-experience and national or social service, stressing physical education, games and sports and developing a rich and varied plan of co-curricular activities.

At the school stage, there is an urgent need to upgrade and improve curricula, to increase their knowledge content and to provide adequately for the development of skills and the inculcation of right interests, attitudes, and values. It is also necessary to introduce courses at two levels — ordinary and advanced. At the university stage, the combination of subjects permissible for the first degree should be more elastic than at present and should not be linked rigidly with the subjects studied at school. There should be provision for general (pass and honours) and special courses. At the post-graduate stage, courses should be designed with three objectives: preparing teachers for schools; catering for the needs of students who are still interested in broad connected areas, and providing a high degree of specialisation.

(2) *Adoption of Improved Methods of Teaching and Evaluation:* This programme should be promoted through teachers, production of literature and establishment of subject-teachers' associations. A programme of high priority would be to improve the teaching of languages. It is also necessary, as recommended by the Education Commission, to establish a Bureau of Evaluation in each State to implement an intensive programme of examination reform in close collaboration with the National Council of Educational Research and Training. This programme should include, amongst others, the reform of external examinations, reduction in their number, early declaration of results, introduction of a system of internal assessment in all institutions and making it an integral part of the promotion procedures from class to class, and the maintenance of appropriate progress cards for all students.

(3) *Book-Development Programmes:* These will include the following:

(a) The production of text-books in English and modern Indian languages which contain Indian experience and material, written by Indian authors, and

specially oriented to Indian conditions and the needs of the Indian students;

(b) Rationalisation and expansion of the book production schemes which are now being implemented in collaboration with friendly countries like the U.S., the U.K. and the U.S.S.R;

(c) Further development of the programmes of textbook production for the school stage under the National Council of Educational Research and Training;

(d) Development of text-book production programmes for the school stage under the State Governments, through the establishment of autonomous organisations and the development of research in curriculum and text-book production; and

(e) Preparation and publication of children's books of all categories, especially with a view to promoting national integration. These books should be produced simultaneously in all the modern Indian languages and should be priced the same in every language. Through them a good deal of common reading material will be available to every Indian child. This will promote national integration and help to raise and equalise standards in all parts of the country.

It is easy to see that all these and similar other programmes need human effort rather than any large-scale investment of resources in physical or financial terms. An increasing emphasis will therefore have to be placed on them in planning educational development in poor countries.

VIII

Planning for educational development in a poor country is a very difficult and challenging task. It is true that all educational development needs additional investment and that the total educational expenditure in India will have to be increased, as the Education Commission has pointed out, from Rs. 12 per head of population or 3 per cent of the national income in 1965-66 to Rs. 54 per head of population or 6 per cent of the national income in

1985-86. But the new educational system that we need cannot be created by money alone and the secret of success in this endeavour will lie in developing a proper technology of planning which will emphasise cost-consciousness, intensive utilisation of existing facilities, evolution of low-cost techniques, selective approach, and creation of a climate of dedication and sustained hard work. If this can be done, we will have a much better return even for the existing level of investment in education; but if it cannot be done, a great part of the additional investment we might make in education will go to waste as it does at present. One cannot therefore over-emphasise the importance of changing our present methods of planning which are suited largely to rich nations and to adopt instead a new strategy of educational development which will be in keeping with the conditions of a poor country. As Dr. Triguna Sen has observed:

'My main plea at this critical juncture is that we should change our strategy of educational development to suit the present situation. In the past, we have pumped money into the educational system fairly

liberally — educational expenditure has increased, in the last fifteen years, at 11.7 per cent per annum (at current prices) which is even more than twice the growth in national income. But we have not emphasised human effort adequately, with sad results that are familiar to all of us. For the next few years, we shall have to reverse this. We shall need more money no doubt; and I shall have to appeal to the Finance Minister to have a specially soft corner for education. My appeal to the philanthropic public would be stronger still and I will plead with it to give generously to education and to make up, in part at least, the shortfalls of the public sector. But I will make my most earnest plea to students and teachers to emphasize human endeavour, to make the most intensive use of all available facilities, to reduce all wastages to the minimum to bring about a major change in their attitudes to make the educational system elastic and dynamic, to create a climate of hard and sustained work and in this way demonstrate that much greater progress is possible even with a comparatively smaller investment of funds.' (Convocation Address at Aligarh, March 29, 1967).